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ABSTRACT

To improve instruction in a community college course on Latin American culture and civilization, an instructor designed three interrelated classroom assessment techniques (CATs) to study student reactions to instructional approaches and student learning strategies. Between 26 and 37 students responded to the assessments. Results from the first CAT validated as useful and effective the instructor's teaching approach through multiple methods to engage students in analyzing and reflecting about course readings. Taken together, responses to the three tests seem to identify a gap in assumptions about student learning strategies (at least for reading course texts) in which the instructor may assume that students engage the text with specific learning techniques, while the students are not actually using these techniques and may be expecting the instructor to initiate or lead them through the learning process. Some implications for instruction are discussed. Five appendixes contain the CATs, results from these tests, a student statement about learning strategies, and some instructor-prepared questions. (SLD)

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IMPROVEMENT OF INSTRUCTION

WITH THE USE OF CATs TO CLARIFY

STUDENT LEARNING STRATEGIES

Spring Semester 1999
Latin American Culture
and Civilization

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submitted to the
Center for Excellence
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Improvement of Instruction
With the Use of CATs to Clarify Student Learning Strategies

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I. Rationale for an Extended and New Use of CATs

Having completed a Classroom Research Project (CRP) using self-designed classroom assessment techniques (CATs) during the Spring 1998 semester at Parkland Community College, under the guidance of the Center for Excellence in Teaching and Learning, I wanted to pursue another application of CATs for the purpose of assessing the effectiveness of specific elements of my instructional approach and ascertaining student self-assessment of specific learning strategies, during the Spring 1999 semester, as part of my self-initiated continuing professional development, with the purpose of increasing my instructional effectiveness.

The need to extend what I learned from the CRP in Spring 1998 presented itself for at least two strong reasons. One is a difference in course setting: the highly successful CRP of Spring 1998 (see my report to the Center for Excellence, "Values Clarification: A Classroom Research Project with metaCATs"), was applied to the course LAS 189: Introduction to the Liberal Arts and Sciences; however, my current and major teaching responsibility is for the Humanities course HUM 106: Latin American Culture and Civilization. The second reason is that while the Spring 1998 CRP focused on the achievement of specific course objectives and course goals that related directly to

identified parts of the Parkland College Mission Statement, I also saw the possibility of classroom assessment moving beyond the assessment of learning outcomes to an assessment also of learning strategies. That is, in a student-centered learning environment, I thought it also to be useful for the improvement of instruction to identify (1) particularly effective learning strategies, and (2) particularly effective elements of my teaching approach as identified by students.

Results of these classroom assessments would be used to inform and improve instruction during the semester, hence assessments (CATs) would be conducted early and midway in the semester.

II. Purpose and Design of the New CATs

In order to assess the multiple elements of both instruction and student learning strategies described above, I decided - based on my previous experience with classroom assessment in Spring 1998 - once again to design and apply a series of CATs that would be interrelated in a meaningful way apparent to students. Consequently, in Spring 1999 I designed and applied the following CATs (see Appendix A for the forms) to assess

defined elements of instructional effectiveness and of student learning strategies:

CAT 1: Student Learning: In the Time of the Butterflies by Julia Alvarez

CAT 2: Reading as Learning: Learning Strategies

CAT 3: Reading as Learning: Level of Detail

CAT 1 was designed to assess the effectiveness of my use of multiple methods in teaching a specific course text (1 of 4 texts), the novel In the Time of the Butterflies by Julia Alvarez (1995). Since there was a related assignment, a paper analyzing chosen aspects of the novel, students were asked on this CAT to assess not only the effectiveness of the instructional approach but also the relevance and helpfulness of learning activities from the point of view of their contribution to the successful completion of this assignment. Clarity of the instructor's instructions for this assignment, and the instructor's expectation of level of student work, were also assessed by students on this CAT.

CAT 2 was designed to follow up in part on one of the notable findings of CAT 1: that student ratings of their own work

in engaging the novel and taking useful notes from their own reading were notably low. Hence, CAT 2 asked students a series of 10 questions that parsed the task of reading a text and associated learning activities into discrete steps in a sequence representing a range of possible learning activities. In addition, there were two questions at the end that constitute a meta-assessment, as they ask students to reflect on this learning process: they ask whether the student was aware of all 10 of these learning activities promoting learning and metacognition, and whether the student had assumed these learning activities to be the responsibility of the instructor.

CAT 2 therefore attempted to assess not only the extent of student awareness and use of specific learning strategies, but also student assumptions about instructor responsibility for specific elements of student learning strategies. Further, the CAT served as more than an assessment technique to improve instruction: it also functioned as a teaching device alerting students to additional learning techniques to add to their inventory of learning strategies.

CAT 3 was designed to assess a specific component of my teaching approach: the effectiveness of instructor-prepared

guides to reading relative to student learning for exams. This question had in part been addressed in CAT 1, but there it was relative not to exams, but to the completion of a paper. The results of CAT 1 had shown students to rate particularly high (4.5 on a scale of 1-5, and 4.7 on a related item) the usefulness of instructor-prepared questions on the novel - questions also used as the basis for group work in class and for class discussion. Would students also rate highly instructor-prepared questions that serve as a basis for class discussion of assigned readings and as a study guide for upcoming exams? Since papers and exams involve significantly different learning strategies for students, I wanted to assess whether a specific teaching approach highly successful for one type of measure of student learning (the paper) would also be effective in student preparation for another measure of learning (the exam).

III. Selected Findings from the New CATs

A. CAT 1: STUDENT LEARNING: <u>In the Time of the Butterflies</u> by Julia Alvarez

CAT 1, designed to assess the effectiveness of my use of multiple methods in teaching a specific course text, yielded some notable and some surprising findings.

CAT 1 (see Appendix A) is a combination forced choice and open-ended instrument that yielded both quantifiable responses and qualitative statements (see Appendix B for summaries of results for two sections of the course, M/W and TH).

Most notable is the finding that students in both sections rated highly - in fact most highly of all learning activities - the instructor-prepared questions and the group work and class discussion based on these questions: mean ratings of 4.5 (Q 1), 4.7 (Q 2), and 4.6 (Q 3). This finding is confirmed by Q 7, asking students to list the <u>most</u> helpful learning activity: frequency "hits" for Q 1, 2, 3 are highest (see B.7. of results tabulation).

However, these findings, disaggregated by section, were also surprising in one regard: results did not coincide with initial instructor expectations. My expectations were for lower ratings from the M/W section, where I thought a greater number of students to be struggling with the material and therefore likely to rate their assessment of their own learning of the material to be lower. Yet, results for this section in both mean scores of student ratings and range of ratings indicated higher student satisfaction with learning due to instructional techniques. A plausible and interesting explanation of this apparently

anomalous finding may be that precisely the students who find themselves struggling more to learn relatively difficult material appreciate and rate more highly very structured and purposive instructor-prepared guides to learning, as well as activities that these students see as contributing significantly to their learning and satisfactory task completion (i.e., satisfactory grade on their paper).

One student comment in the open-ended portion of the CAT illustrates how students perceived the effectiveness of a student-identified element of my teaching approach. In answer to the question, "For understanding and enjoying learning about the novel, I found most useful ...", this student identified "the instructor-prepared questions: they helped highlight the important parts of the novel and what issues we should be focusing on" (see Appendix E for sample questions).

Also informative is a student's comment elicited by the question of the instructor's expectations for the paper on the novel: "you enabled us to reach beyond ordinary realms of thinking; we were expected to think hard and to respond to the novel - an amazing experience!"

As this additional comment illustrates, though instructor expectations of student thinking in engaging course material may

be high, such high expectations are often appreciated by some students and recognized by them as an important guide to meaningful learning, while not rated as "too high."

The issue of instructor expectations for student performance was an important item embedded in CAT 1. On student course evaluations, for some students there may be a perception that instructor expectations for an interdisciplinary course like HUM 106: Latin American Culture and Civilization, which is assigned transfer credit at the University of Illinois, are too high. In part, this may be due to the student's unfamiliarity with university-level courses; in another part this may be due to the student's unfamiliarity with open-ended instruction appropriate to such open-ended materials as novels and the multiple interpretation of historic events, as found in such Humanities courses as HUM 106.

One student comment in the open-ended portion of CAT 1 illustrates how students may appreciate, instead of finding problematic, this open-ended approach. Describing the most useful element in my teaching approach to the novel, this student lists "the discussion in class of the questions provided: it gave you more than one way of looking at things in the novel."

Consonant with this student's appreciation of the open-ended instructional approach is the finding from both sections of HUM 106 on the specific CAT question about instructor expectations: of a total of 37 students, 37 students rated instructor expectations to be "reasonable," and 0 students found instructor expectations to be "too high."

Another issue assessed in CAT 1 was whether the instructor's instructions for completing the assignment (the paper on the novel) were clear, or confusing in any way. Results show 18 of 18 students in one section to rate instructions as clear, and 18 of 19 students in the second section to rate instructions as clear. The single student who thought the instructions for the paper were not clear actually misunderstood this item on the CAT, as evidenced by the student's explanation of lack of clarity, which ambiguously refers not to the instructions, but to the instructor-prepared questions used as guides to student learning about the novel and as a basis for class discussion. The student's ambiguous/unclear statement about the instructor-prepared questions ("questions need to be more clearly defined") is countered by another student's observation that "some questions were intricately worded and took me a while to 'decipher'; that could be good, though, because it caused me to

think harder about the topics." This student's comment is reminiscent of the student's comment above, "you enabled us to reach beyond ordinary realms of thinking; we were expected to think hard and to respond to the novel - an amazing experience!" A reasonable conclusion from such contradictory student assessments may be that course material that challenges students to think about their learning (thus promoting metacognition) is well appreciated by some students, but misunderstood and rated low by other students.

But all this is still an aside about a particular instructional approach (instructor-prepared questions about reading material), confused by the single student above with the question of instructor instructions for completing a specific assignment (the paper on the novel). Hence, in this case the apparent anomaly of 1 student of 37 misunderstanding the difference between instructor-prepared questions as a guide to learning vs. the instructor's instructions for completing an assignment illustrates the potential confusion of some students in understanding otherwise clear instructions for completing a particular assignment. The student's confusion resulted not from lack of clarity in the instructor's instructions for the assignment, but from the student's confusion of these

instructions with other (irrelevant) course materials. However, 97.3% of the students in the class had no such difficulty. Still, this result may alert an instructor to the need of individualized instruction and individual attention to each of the 24 students in the class.

One of the most surprising, though perhaps not unexpected findings of CAT 1 was the students' assessment of their own efforts in learning: students consistently, in each section of the course, rated themselves as low on notetaking, particularly on their notetaking while reading the text (the novel). Item 4 of the CAT (see Appendix B) has the lowest mean (average) of all the student ratings of all learning activities relative to the novel and the completion of the paper on the novel: this is the CAT item that asks students to rate the value/effectiveness for completing the paper of their own notes on reading the novel. It is the only CAT item on which student ratings dip below 4, on a 5 point scale. While students rated the value to their learning of instructor-prepared questions on average as 4.6 of 5, their (surprisingly honest) ratings of their own efforts to learn, by taking adequate notes on their reading, dipped to an average of 3.8 of 5 (with a remarkable consistency for both of the two sections of the course, one group averaging 3.78, the other

3.79). Thus, instructor-initiated learning strategies were rated by students at .8 (almost 20%) higher than student self-initiated learning strategies.

This difference prompted me to try to ascertain the reasons for students taking less responsibility for their learning: could some of that difference be accounted for by student assumptions that all learning and/or several specific elements in possible student learning strategies were the responsibility not of the student, but of the instructor?

This question led me to design another CAT - this one addressing specific questions of student learning strategies, including important assumptions that some students may be making about the responsibility instructors, rather than students, bear for specific elements of the overall student learning strategy.

B. CAT 2: READING AS LEARNING: Learning Strategies

CAT 2 (see Appendix A) presents a series of 10 questions regarding possible learning techniques or activities in which students could engage on their own to increase their understanding of any text or assigned reading. The questions ask about such activities as underlining important passages, and taking note of what the student doesn't understand and what

remains unclear - so that for example the student can ask about these unclear points in class.

CAT 2 is intentionally a forced-choice instrument, allowing for easily quantifiable results. Nevertheless, several enterprising students also entered some comments (see Appendix C) of great value as qualitative statements that amplify particular issues about student learning strategies being assessed in CAT 2.

The results of this CAT (see Appendix C) are a mix of expected and surprise findings.

I had expected few students to make marginal notes in the text while reading (Q 2), though this is an effective technique in partial outlining of main ideas and an efficient guide for retention. My expectation was borne out by this item receiving the next to lowest average rating (1.5 on the 3 point scale). Even lower (1.4) was the technique of self-testing (Q 8), which I had expected few students to use. Frequency ratings confirm these low averages and profile the responses even more: the highest number of students (10) marking 1 on the scale, indicating they do the activity "rarely," occurred for Q 2; an equally high frequency (10) marking 1 occurred for Q 8. Thus, marginal notes (glosses) and self-tests are omitted by most students.

Surprise findings include one low and one high rating. I was surprised by the low average (1.6) and low frequency of students using the simple technique of underlining important passages while reading (Q 1). Only 3 of 32 students marked 3, "always," for this activity. Despite my recommendation to the class to use this technique, and giving them a sample illustration of how I use it in my own text, few students engage in this learning activity. My class discussion later of the results of this CAT item revealed two main reasons why students do not underline, or highlight, important passages in assigned texts while reading. Some had been conditioned by prior schooling (K-12) not to mark texts (which in this case were the property of the school district), a habit that carried over to their own books. Many other students were reluctant to make marks in texts because it would lower their end of semester resale value in the college bookstore (thus also indicating no prior intention to keep the books for future reference and as an easy reminder of their course learning). But while many of these students were aware of the available alternative of taking notes from their text reading on their own notepaper, relatively few students do so, as Q 5 in CAT 2, with a mean rating of 4.3, shows (see Appendix C) and as confirmed by students during the class

session discussing CAT 2 results.

Also surprising was the high rating, indeed the highest average for all questions, for item 7: "I consult additional relevant class materials, such as handouts with study questions, to verify my understanding of the text and main ideas." The response range for this item on the 3 point scale was 2-3, with no students marking 1, "rarely." Instead, the highest frequency count at 3 on the scale, "always," occurred for this item, with 24 of 32 students (75%) marking 3. This indicates extensive (most students) and frequent ("always") use of this learning activity - an encouraging sign that most students (as results of CAT 1 already showed) continue to see as very useful, and indeed do make use of such instructor-prepared learning aids as questions about the readings.

Another notable and somewhat surprising finding came in the portion of the CAT designed as a meta-assessment.

In this part of the CAT, less surprising are the results of Q 11, which asks students to note which of the learning techniques 1-10 they had not known about. Of 32 students, 9 marked this item (Q 11), indicating that 28% of students had not known about one or more of the 10 listed learning activities. Also, Q 8, self-testing, and Q 5, outlining of main points and

notetaking after reading the text, were marked most frequently as previously unknown learning techniques for reading course texts.

If the CAT has alerted a significant number of students to several basic learning techniques for reading a text, then its secondary purpose of functioning as a teaching device will have been engaged for these students.

Somewhat surprising, however, were the results of Q 12, the second item in the meta-assessment. Many students, 23 of 32 or 72%, entered a number coding a learning technique here. The high frequency (9) with which item 5 was marked may help explain the problem encountered in CAT 1, namely that students had rated themselves so notably low on their own notetaking (CAT 1 items 4 and 5 - see Appendix B). Item 12 of CAT 2 is asking students to note which of the specific learning techniques (1-10) they "had assumed or expected the instructor to do." When marking item 5, notetaking, so frequently, are these students really saying that they expected the instructor, after students have read the text, to "outline main points and take other notes as guides to understanding and retention"? And likewise, when marking item 4, reflecting on main points, even more frequently (11), are these students <u>not</u> engaging in this learning activity immediately after having read the text because they expect the instructor to do

this during class discussion of the reading later?

Of course, I provide outlines and lecture notes in conjunction with class discussion of the reading material - however, this CAT item response indicates that many students always expect outlining and notetaking to be done by the instructor while they do not engage in this learning activity on their own in conjunction with their reading of the text as assigned, before the class meeting in which the text is scheduled for discussion.

If this interpretation is correct, it confirms my informal observation when I ask students to show me their notes and their answers about readings to instructor-prepared questions. Many of these students have no personal notes and blank spaces in the handouts of instructor-prepared questions, indicating that they have engaged in neither notetaking nor in an active reflection on the text/reading assignment.

However, another interpretation suggests itself, at least for some students, to the puzzling responses to Q 12 in the meta-assessment of CAT 2, by the unsolicited spontaneous comment of one student written at the end of CAT 2:

> "The reason I listed these [learning techniques that students assume/expect the instructor to do] is because I find most helpful, and enjoy, gaining vital insights from

the instructor about important passages in readings. This process is aided by instructor-prepared questions and outlines, as well as in class discussion."

In this case, the student has clearly read item 12 not as restricted to student learning strategies involved in the student's completion of a reading assignment, but rather learning strategies facilitated and extended by instructor-initiated activities such as instructor-prepared notes and questions and instructor-led class discussion. As a way of complementing her own learning strategies, this student expresses her high valuation of instructor-initiated activities that lead to significant additional learning for her after having read the reading assignment because they structure and focus that learning.

Also noteworthy about item 12 of CAT 2 is the extensive range of activities students assume to be the responsibility of the instructor: all but one of the total 10 activities were marked at least once. But that item (Q 6) is perhaps most obviously a student activity, referring to what the student does with unclear material (see Appendix A).

C. CAT 3: READING AS LEARNING: Level of Detail

CAT 3 was designed to follow up on a specific part of my teaching approach: instructor-prepared guides to reading. In

particular, I wanted to ascertain (1) whether instructor-prepared questions were clearly worded and served effectively as a guide to important issues in the reading, and that students might also expect to function as a guide to upcoming exams; and (2) to what extent students read carefully at a meaningful level of detail, as necessary for exams.

In order to motivate students to do the CAT carefully, and impose no time limit for its completion, I decided to construct the CAT as a quiz with a 10 point value, then gave it to students as a take-home exercise (see copy of CAT 3 in Appendix A). This allowed students to read carefully the questions on the CAT testing their reading comprehension even as they could consult relevant passages from the text. Theoretically, all students reading the text carefully at a meaningful level of detail, as necessary for later exams, would attain a score of 10, if the instructor-prepared questions on the CAT were worded clearly.

Results show that of 26 students who completed the CAT in timely fashion, 14 students scored 10 points. That is a little over half, or 54% of participating students. A further 9 students (35%) scored 8 points, missing 1 of 5 questions; and 3 students (11%) only scored 6 points, missing 2 of 5 questions or 40% of the total credit.

Why did 12 of 26 students (46%) miss at least one question, when they could answer the question by looking at the text and when they were motivated by the possibility of scoring points?

In later class discussion, as I returned results to students, all students asserted that the instructor-prepared questions were clearly worded, and one student added that she did not consider any of the questions to be "trick questions." They were straightforward questions, students said, addressing important issues in the read text. Thus CAT objective (1) above - to ascertain whether instructor-prepared questions were worded clearly and served effectively as a guide to important issues in the reading and thus as an effective guide to upcoming exams - was answered by results in a strong affirmative. This affirmative answer is implicit in the 54% of participating students who attained a perfect score, and it was also emphatically affirmative in the explicit statements in later class discussion of CAT 3 results by students who had missed 1 or 2 correct answers.

CAT objective (2) above - to ascertain to what extent students read carefully at a meaningful level of detail, as necessary for exams, particularly when prompted to do so by the possibility of scoring points - was answered by results

quantitatively (46% of students did not) and by later class discussion qualitatively, as students who had missed a question rechecked the text and found why they had misread it. Thus, the finding from class discussion is that for these students, the question they had missed was worded clearly, but they had failed to read the text carefully at the necessary level of detail. They had failed to analyze the text and assemble the necessary information to find the correct answer.

This process of some students applying an inadequate and incomplete learning strategy is illustrated well by Q 5 of CAT 3. For this item, in one section of the course nearly 50% of participating students (6 of 13) marked the answer to the incorrect choice: a. Peruvian. When I asked these students to find the passage in the text where it is stated that Yanacocha is a Peruvian majority owned company, none could do so.

The relevant textual passage states (GS 205):

> "Yanacocha is the largest gold mine in South America. It is operated by Denver-based Newmont in a joint venture with a Peruvian mining company, Buenaventura. Newmont owns a 51.4% share of Yanacocha."

That 6 students failed to see that Yanacocha is a majority American-owned company arose from two possible misreadings that both short-circuit the text in a superficial, careless reading.

One possible misreading arises from a disproportionate focus on the phrase "Peruvian mining company," with a hastened superficial connection to "Yanacocha" - a process that ignores the double qualifier that it is a joint venture, and that the American partner in the company owns 51.4% or a majority share. Another possible misreading arises from an equally superficial reading that fails to identify Newmont as an American company and then fails to connect Newmont with the later phrase identifying it as the majority (51.4%) owner of Yanacocha.

Interestingly, students who had missed this question honestly conceded a lack of careful reading, even as they clearly understood the implications of this misreading: failing to perceive the issue of national sovereignty compromised by foreign interests. That is, after class discussion students clearly understood the importance of Yanacocha not being a majority Peruvian-owned company and thus being much less amenable to local (Peruvian) accountability for its toxic emissions into the local environment. However, in their initial reading, their misreading of the text had effectively blocked these students' recognition that the author was thus raising the issue of lack of national sovereignty in imposing accountability.

On the other hand, 77% of participating students (20 of 26)

marked this item on the CAT correctly. One student even added an unsolicited comment explaining her choice: "Denver-based Newmont owns 51.4% of Yanacocha."

Thus, many students did read at an adequate level of detail, which in turn was the essential basis for the correct synthesis of relevant information leading to the correct conclusion.

IV. Discussion of Findings and Issues

The results of CAT 3, though based on a small sample, nevertheless raise several important issues about student learning strategies and a flexible teaching approach responsive to these issues.

One issue may be a mistaken assumption that, as part of an effective learning strategy, students engage the text by (1) underlining and/or noting important passages that raise key issues (political, economic, social or psychological, ethical, aesthetic issues - depending on type of text), and (2) reading with adequate care at a sufficient level of detail that signals these issues.

CAT results indicate that many students may follow this kind of learning strategy, though not always. But a significant number of students (46% in the CAT 3 sample) may not consistently

apply an effective learning strategy in their basic readings of texts, leaving it to the instructor to alert them both to significant details (CAT 3) and to important issues and main points (CAT 2).

This would seem to identify a gap in assumptions about student learning strategies (at least for reading course texts), in which the instructor may assume students as a matter of course to engage the text with specific effective learning techniques, while many students in fact do not (as shown by results of CAT 2 and CAT 3), and indeed may expect the instructor to initiate and/or lead them through the learning process by use of these specific learning techniques.

A partial, and so far apparently quite effective response to this dilemma seems to be an instructional approach that relies on instructor-prepared questions and study notes and subsequent class discussion to engage students more fully in an active understanding of course texts.

*

In summary, the results of CAT 2 and CAT 3 indicate that many students make insufficient use of a range of learning techniques available for reading a text, and that in particular many students do not engage in the activity of outlining main

points and taking notes as a guide to understanding and retention (a salient finding of CAT 1), and many students also fail to read course texts on their own at a sufficient level of detail to generate consequent key issues raised in the text.

Perhaps most counterproductive is the extensive occurrence of student assumptions that the instructor has the responsibility to provide for the results or products of what are actually student learning techniques. In that case, student expectations of instruction and an unfortunate misunderstanding of the learning process may seriously compromise these students' learning strategies by reducing them to a severely limited number of activities.

In a previous use of CATs for a CRP (Classroom Research Project) during Spring 1998, I had found evidence that at least some students make mistaken assumptions about different types of courses with different goals and learning objectives, and that some of those assumptions are based on the student's previous experiences with a limited instructional approach (see Appendix D). In short, many students may be used to and expect little more than very structured guidance on what specific material to memorize for the exam - material thus qualified as "important" and memorized for the test (a summative evaluation instrument),

but rapidly forgotten after that. However, the interdisciplinary humanities courses that I teach have among their course goals for learning outcomes students' critical reflection and understanding of historic and current cultural events and patterns, often applied to similar life situations experienced by students or likely to be encountered by them. Hence, critical reflection and a more profound understanding of historic and current cultural issues and problems, such as stereotyping and its effects, engage students in learning as an active process about situations to which a single answer is not a given. Hence, neither class discussion nor testing of learning require mere rote memorization.

Whether most students actually succeed in distinguishing different types of courses and the different kinds of instructional approach adapted, for example, to an interdisciplinary humanities course is a question that it would be useful to investigate systematically. Certainly, should any students fail to distinguish these differences, they will also be most likely to fail to adapt their learning strategies.

This point is made perhaps even more salient by one student who clearly recognized the difference in type of course and the consequent changes required in both instructional approach and

student learning strategy. The following comment by this student, written below the 12 item part of CAT 2, was apparently strongly felt by the student, who wrote the long comment although CAT 2 had no specific space for comments. The comment comes from one of the best students in the class.

> "I prefer the atmosphere that is present now, in which I find myself eager to participate in reflection on readings and then the communication of ideas, issues, etc. in class. This teaching approach is preferable for me, as it forces me to do the thinking instead of being handed main ideas etc. by the instructor. It also leaves me free to form my own ideas and make my own decisions about meanings in the readings. This kind of self-thought to me is the most important aspect of learning, and this class, with the present atmosphere and teaching approach, makes it possible to be self-reliant in learning - which carries over to my other classes. Please make no changes in instructional approach to intercede in this self-reliant learning process, but instead continue to encourage it."

V. Summary of Objectives and Findings, and Conclusions

In an effort to improve instruction with the use of CATs to clarify student learning strategies, in the Spring 1999 semester Parkland Community College course HUM 106: Latin American Culture and Civilization, I designed a series of interrelated CATs (Classroom Assessment Techniques). These CATs had the following 10 objectives and yielded the respective findings given below.

Conclusions follow each set of findings, and I state a general conclusion at the end.

OBJECTIVE 1: To ascertain particularly effective elements of my teaching approach as identified by students.

FINDINGS:

In CAT 1, students rated most highly (on a 5 point scale)

(a) instructor-prepared questions on readings : mean = 4.5

(b) group work on selected questions in class: mean = 4.7

(c) class discussion of these questions: mean = 4.6

These high ratings were confirmed by high frequency counts of which specific learning activities students found most helpful in preparing them for the completion of an assigned paper. The high ratings were further confirmed by written student comments, such as:

"I found the questions as well as in-class discussion incredible for they allowed a deeper consideration for what was being read."

CONCLUSION:

CAT 1 results validate as useful and effective my teaching approach using multiple methods for engaging students in analyzing and reflecting about course readings in order to promote a deeper understanding - learning activities that students see as very useful in the satisfactory completion of their written assignment.

OBJECTIVE 2: To ascertain whether students perceived instructor expectations of level and quality of work to be reasonable.

FINDINGS:

In CAT 1, 100% of students (37 of 37) rated these instructor expectations to be reasonable; no students (0) found them to be too high.

CONCLUSION:

While occassionally there may be a gap between the perception of some students of instructor expectations and instructor self-assessment of these, major contributing factors to general student satisfaction here may be students' view of (1) their active involvement in learning as promoted by effective instructional techniques, and (2) their degree of successful completion of the corresponding assignment or exam. Relative to (1), since students rated highly my instructional approach using multiple techniques to engage students in active learning (see Objective 1), they may also have felt well prepared as a result to meet instructor expectations of level and quality of work in performing their assignment.

OBJECTIVE 3: To ascertain whether students evaluated instructor instructions to students for assignments to be clear and study guides to be clearly worded.

FINDINGS:

In CAT 1, almost all students (36 of 37, or 97.3%) rated instructor instructions for assignments to be clear. On closer investigation, the student marking "unclear" had confused the item, thinking not of the instructions but of the instructor-prepared questions as a guide to understanding the assigned text.

Results of CAT 3 also show instructor-prepared questions as study guides for later exams to be clearly worded.

CONCLUSION:

Continued attention to clear wording of instructions and materials serving as guides to related assignments and later exams is warranted, as is individualized instruction and individual attention to every one of the 24 students in the class.

For this semester, one immediate outcome of these findings and this conclusion was my revision of instructions for Paper II in the course.

OBJECTIVE 4: To assess the degree of usefulness to students, as evaluated by students, of instructor-prepared materials such as study questions and topic notes.

FINDINGS:

Instructor-prepared materials (such as study questions, topic notes, quizzes) were consistently rated high by students on CAT 1 (see Objectives 1 and 5), as well as on CAT 2 (see Objective 7) and on CAT 3.

CONCLUSION:

This finding indicates that continued use and reworking/refining of instructor-prepared materials designed to assist student learning is welcomed by students and thus warranted as part of an effective instructional approach.

OBJECTIVE 5: To ascertain the extent to which students find instructor-prepared questions on assigned readings useful to reading comprehension and retention.

FINDINGS:

CAT 1 results show students rating this learning activity highly useful: mean = 4.5 (on a 5 point scale).

This finding was amplified by numerous student comments, such as this student's:

"The instructor-prepared questions helped highlight the important parts of the novel and what issues we should be focusing on." (cf. also Objective 1).

CONCLUSION:

This teaching approach seems to work very well for many students, as a structured approach to the analysis and interpretation of sometimes complex material.

The strong finding from the CATs in favor, particularly by students who are struggling more with complex and difficult texts, prompted me to continue using this teaching technique for another complex text later in the semester, Isabel Allende's House of the Spirits (1982).

OBJECTIVE 6: To ascertain whether instructor-prepared questions serve effectively as guide to important issues in the reading and as guide to later exams.

FINDINGS:

Results of CAT 1 (see Objectives 1 and 5) affirmed the first part of this objective, relative to reading comprehension.

Results of CAT 3 confirmed the second part of this objective, relative to guide for exams. For example, 54% of participating students scored a perfect 10 on the quiz (CAT 3) questions, and in later class discussion students affirmed the usefulness of these questions as guides to major issues in the assigned reading. An earlier comment (on CAT 1) by a student

listed as most helpful "class discussions with instructor's assistance, reviewing material, and most of all the quizzes!"

CONCLUSION:

These findings confirm similar findings in related objectives (see esp. Objectives 4 and 5) of the usefulness to students of instructor-prepared materials as learning aids.

OBJECTIVE 7: To identify particularly effective learning strategies.

FINDINGS:

Both CAT 1 and CAT 2 indicate that many students rely heavily on instructor-initiated learning activities.

CAT 1 identified as rated highly by students instructor-prepared questions on readings, and class discussion of these (see Objective 1), with a mean rating of over 4.5 on a 5 point scale.

CAT 2 confirmed this tendency, as students rated most highly as a learning technique consulting instructor-prepared materials to verify their understanding of the text, with a mean rating of 2.75 on a 3 point scale.

CONCLUSION:

While many students are aware of multiple learning

techniques, as indicated in the meta-assessment portion of CAT 2, they fail to use basic and very effective learning activities, due to extraneous (financial or conditioned) reasons (see section III. B. of this report for details).

To compensate for lack of engaging known and effective learning techniques, most students tend to shift expectation to the instructor for initiating learning activities. While this may not be the best approach to learning (see a student's self-assessment of different learning strategies in Appendix D), this general student expectation confirms the current trend in education toward programmed learning or mastery learning.

OBJECTIVE 8: To identify specific elements of student learning strategies, and to ascertain the extent of student use of specific learning techniques and activities.

FINDINGS:

In CAT 1, students rated as comparatively low their own efforts to learn. They rated low (on a 5 point scale) the potential activity of

(a) taking notes on their reading: mean = 3.8, and

(b) taking notes on class discussion of the assigned text: mean = 4.3.

CONCLUSION:

This finding indicates that while students rate instructor-initiated learning activities highly, they rate their own efforts to learn considerably lower. Further, their own effort to learn (in this case, notetaking) is stimulated and increases as a result of instructor-led discussion.

OBJECTIVE 9: To identify effective learning stategies underutilized by students.

FINDINGS:

Relative to effective student notetaking on their assigned reading, CAT 1 had shown a comparatively low student assessment of their own utilization of this effective learning technique.

CAT 2 revealed more specifically (on a 3 point scale) that

(a) few students consistently underline important passages while reading: mean 1.6

(b) few students take marginal notes as an aid to comprehension and retention: mean 1.5

(c) few students compensate for not marking their own text (see section III. B. discussion) by "outlining main points and taking other notes" on their own, as guides to understanding and retention (Q 5) mean 1.9

CONCLUSION:

These low ratings of students' own efforts to learn, to

engage in learning activities that promote both understanding and retention, indicate a tendency of students to rely more on instructor-initiated learning activities. This conclusion is also affirmed by another relevant finding of CAT 2, namely that 75% of students consistently rely on instructor-initiated learning activities or materials to verify their understanding of the text.

Hence, a dual approach seems warranted. One is to make students aware and encourage them to use these specific learning techniques more extensively and more consistently. The other is not to assume that all or even most students do so as a matter of course, but instead to provide supplementary learning techniques to students that compensate for their underutilization of such basic learning techniques as underlining and marginal notes, in order to capture main ideas, deepen understanding, and promote retention.

OBJECTIVE 10: To ascertain to what extent students read carefully at a meaningful level of detail, as necessary for exams; that is, whether students consistently apply an effective learning strategy in their basic readings of texts.

FINDINGS:

Results of CAT 3 indicate that the majority of students

(54%) read texts carefully, but many (46%) may not be reading at a sufficient and meaningful level of detail.

Analysis of one CAT 3 item and later class discussion revealed that several students tended to misread the text in a relatively superficial, unanalytical reading that blocked those students' awareness of important issues implicitly raised by the text.

CONCLUSION:

There is a significant number of students in each class that may not be reading texts at a sufficient level of detail in preparation for exams. This indicates that specific analysis and interpretation of texts and class discussion of implicit or explicit issues by the instructor are warranted and perhaps essential as part of an effective teaching approach.

GENERAL CONCLUSION (Objectives 1-10)

The totality of all the findings above would seem to identify a gap in assumptions about student learning strategies (at least for reading course texts), in which the instructor may assume students as a matter of course to engage the text with specific effective learning techniques, while many students in fact do not and instead may expect the instructor to initiate

and/or lead them through the learning process by use of these specific learning techniques.

A partial, and so far apparently quite effective response to this dilemma seems to be an instructional approach that relies on instructor-prepared questions and study notes and subsequent class discussion to engage students more fully in an active understanding of course texts.

A consequent and important conclusion is that analysis and research about student learning strategies cannot be separated from a consideration of interacting elements of an effective teaching approach. That is, issues involving student learning strategies arise in an interactive environment in the classroom in which learning strategies and teaching approach consistently interact in complex ways.

APPENDICES

Appendix A: CAT 1, CAT 2, CAT 3

Appendix B: Tabulated Results of CAT 1

Appendix C: Tabulated Results of CAT 2

Appendix D: Student Statement About Different Learning Strategies

Appendix E: Sample Instructor-Prepared Questions About the Novel *In the Time of the Butterflies*

Appendix A: CAT 1, CAT 2, CAT 3

CAT 1
HUM 106
S99

STUDENT LEARNING:

In the Time of the Butterflies by Julia Alvarez

A. In my reading and understanding of the novel, the following teaching/learning approaches were useful to the degree marked:

	not very		moderately		very
1. instructor-prepared questions	1	2	3	4	5
2. group work in class on selected questions	1	2	3	4	5
3. presentation by group and discussion of these questions with instructor/whole class	1	2	3	4	5
4. my own notes on my reading of the novel	1	2	3	4	5
5. my own notes on class discussion of the novel	1	2	3	4	5

B. For preparing my paper on the novel,

7. I found most useful above number/s _____

8. I found the technical instructions given to be clear yes no

[if no, please explain what part of the instructions need to be more clear:

_____

C. In retrospect, the instructor's expectations for this paper were

reasonable too high

D. For understanding and enjoying learning about the novel, I found most useful

_____

CAT 2
HUM 106
S99

READING AS LEARNING:
Learning Strategies

Circle the frequency of the following learning strategies that you use while completing a reading assignment from one of the course texts:

	rarely	some-times	always
A. While reading the text,			
1. I underline important passages	1	2	3
2. I make notes in the text margin	1	2	3
3. I make connections between new knowledge and relevant prior knowledge	1	2	3
B. After reading the text,			
4. I reflect on main points and how this reading fits into the current course topic	1	2	3
5. I outline main points and take other notes as guides to understanding and retention	1	2	3
6. I note what I don't understand and what remains unclear	1	2	3
7. I consult additional relevant class materials, such as handouts with study questions, to verify my understanding of the text and main ideas	1	2	3
8. I self-test: I construct questions on main points, then see how well I answer these	1	2	3
C. After			
9. completing activities 5-8, I check with classmates and/or the instructor to clarify unclear material not understood	1	2	3
10. completing the reading and all associated learning activities (1-9 above), I connect what I have learned to class lectures or additional class material (such as films) and list all main points covered to date on the current course topic	1	2	3

D. Meta-assessment:

11. Of the above strategies for learning (1-10), I did not know that I could do the following (number/s):

_____

12. Of the above strategies for learning (1-10), I had assumed or expected the instructor to do the following (number/s):

_____

Name (optional) _____

CAT 3
S99
HUM 106

READING AS LEARNING: Level of Detail

Name _____

QUIZ IV (10 points)

A. Global Studies: "Peru" (87-90)

1. Peru is the only country in the Americas having two official languages. They are

_____ and _____

2. Land ownership and land use are not a problem in Peru since Peru has the lowest per capita amount of arable land in South America.

T F

3. Bureaucratic attempts at land reform from Lima have failed because of a lack of understanding of basic values in indigenous communities in the mountains, which value using land

a. to attain a basic level of well-being, without profit

b. to produce higher crop yields and a surplus, in order to have a profit.

B. Global Studies: "Conquering Peru" (1977)

4. Yanacocha, South America's largest gold mine, near Cajamarca, Peru, in its mining operations exposes local residents to toxins such as cyanide, lead, mercury - and so pays them $5.60 per week for this health risk.

T F

5. Yanacocha is majority owned by a

a. Peruvian

b. Swiss

c. American

corporation.

Appendix B: Tabulated Results of CAT 1

CAT 1: RESULTS
HUM 106 - M/W
S99

STUDENT LEARNING:

In the Time of the Butterflies by Julia Alvarez

A. In my reading and understanding of the novel, the following teaching/learning approaches were useful to the degree marked:

	not very		moderately		very
1. instructor-prepared questions	1	2	3	4	5
2. group work in class on selected questions	1	2	3	4	5
3. presentation by group and discussion of these questions with instructor/whole class	1	2	3	4	5
4. my own notes on my reading of the novel	1	2	3	4	5
5. my own notes on class discussion of the novel	1	2	3	4	5

RESULTS: N= 18

1. mean: 4.80 range: 4-5+
2. mean: 4.83 range: 4-5
3. mean: 4.75 range: 3-5+
4. mean: 3.78 range: 2-5
5. mean: 4.39 range: 2-5

B. For preparing my paper on the novel,

7. I found most useful above number/s

1 = 9
2 = 12
3 = 13
4 = 6
5 = 11

Additional student comment (item B. 7.):

- the guided discussions helped to "weed out" any unnecessary information and helped in my understanding of the book as a whole

8. I found the technical instructions given to be clear
yes = 18
no = 0

[if no, please explain
what part of the instructions need to be more clear:]

- I think there was a lot of freedom in the structure of this assignment, which is good: each student must carefully consider his/her opinion and create his/her own structure

C. In retrospect, the instructor's expectations for this paper were

reasonable = 18 too high = 0

D. For understanding and enjoying learning about the novel, I found most useful

- to understand the novel, the background information given about the Dominican Republic and Cuba was quite useful in understanding the setting; also, the questions in the handouts were thought-provoking, and the discussion always brought up some points I hadn't considered

- the instructor's approach with the questions he wrote out, and the class discussion

- the essay or short-answer learning style (quizzes, handouts); I think one learns much more when writing, not just answering true/false or multiple-choice questions

- the group work, and the class discussion after the presentations

- class discussion, character analyses

- thinking a lot about what I read, and re-reading until I understood

- group discussion

- the questions the instructor prepared for us

- the questions the instructor had prepared for us to take home and answer, and the group discussions and presentations

- instructor-prepared questions: they helped highlight the important parts of the novel and what issues we should be focusing on

- the teacher's input, which gave us a better understanding of the novel; the teacher went into great detail about the novel, thereby making the reading of the novel quite easy

- group presentations and discussion of these questions with the instructor/whole class

- the [instructor]-prepared questions, and group work

- class discussion

- the facts that the instructor had about the author - it helps to place a person with a name

- class discussions - they helped not only to answer questions, but to understand the novel better

CAT 1: RESULTS
HUM 106 - TH
S99

STUDENT LEARNING:

In the Time of the Butterflies by Julia Alvarez

A. In my reading and understanding of the novel, the following teaching/learning approaches were useful to the degree marked:

	not very		moderately		very
1. instructor-prepared questions	1	2	3	4	5
2. group work in class on selected questions	1	2	3	4	5
3. presentation by group and discussion of these questions with instructor/whole class	1	2	3	4	5
4. my own notes on my reading of the novel	1	2	3	4	5
5. my own notes on class discussion of the novel	1	2	3	4	5

RESULTS: N= 19

1. mean: 4.22 range: 3-5
2. mean: 4.63 range: 3-5
3. mean: 4.39 range: 3-5
4. mean: 3.79 range: 2-5
5. mean: 4.13 range: 3-5

B. For preparing my paper on the novel,

7. I found most useful above number/s

1 = 10
2 = 11
3 = 9
4 = 6
5 = 9

Additional student comment (item B. 7.):

- the guided discussions helped to "weed out" any unnecessary information and helped in my understanding of the book as a whole

8. I found the technical instructions given to be clear
yes = 18
no = 1

[if no, please explain
what part of the instructions need to be more clear:]

- questions need to be more clearly defined

- some questions were intricately worded and took me a while to "decipher;" that could be good, though, because it caused me to think harder about the topics

C. In retrospect, the instructor's expectations for this paper were

reasonable = 19 too high = 0

Additional student comment (item C):

- you enabled us to reach beyond ordinary realms of thinking; we were expected to think hard and to respond to the novel - an amazing experience!

D. For understanding and enjoying learning about the novel, I found most useful

- the indepth detail and background of another country - plus the teaching that comes straight from the heart!

- the guided discussions helped to "weed out" any unnecessary information and helped in my understanding of the book as a whole

- I found the questions as well as the in-class discussion incredible for they allowed a deeper consideration for what was being read

- insight [through instructor-led discussion] into hidden themes such as the "inner revolution"

- the discussion in class of the questions provided; it gave you more than one way of looking at things in the novel

- the questions and referring page numbers

- all the writing [this student wrote lengthy answers to the instructor's questions about the novel handed out during the reading assignment]; I always get more out of a class when I am allowed to concentrate on each item more closely - i.e., visuals, maps, films, papers; all topics presented so far were done beautifully, and I have learned a lot already

- discussing our ideas in class to find out others' opinions

- class discussion: it's helpful to get other opinions, and the night class [TH evening] has great input

- working in groups and getting opinions/help from others [about specific questions/issues in the novel]

- class discussion about themes and ideas presented in the novel, as well as input from other students on the discussion questions

- the group discussions; I received a lot of insight from other group members that I had not thought of myself

- class discussions with instructor's assistance; reviewing material, and most of all the quizzes!

Appendix C: Tabulated Results of CAT 2

CAT 2: RESULTS
HUM 106 M/W
S99

NO=16

READING AS LEARNING:
Learning Strategies

Circle the frequency of the following learning strategies that you use while completing a reading assignment from one of the course texts:

scale: rarely: 1 sometimes: 2 always: 3

			Range (R)
A. While reading the text,			
1. I underline important passages	1.56		1-3
2. I make notes in the text margin	1.44		1-3
3. I make connections between new knowledge and relevant prior knowledge		2.44	2-3
B. After reading the text,			
4. I reflect on main points and how this reading fits into the current course topic	2.19		1-3
5. I outline main points and take other notes as guides to understanding and retention	1.94		1-3
6. I note what I don't understand and what remains unclear	2.19		1-3
7. I consult additional relevant class materials, such as handouts with study questions, to verify my understanding of the text and main ideas		2.81	2-3
8. I self-test: I construct questions on main points, then see how well I answer these	1.63		1-3
C. After			
9. completing activities 5-8, I check with classmates and/or the instructor to clarify unclear material not understood		2.38	1-3
10. completing the reading and all associated learning activities (1-9 above), I connect what I have learned to class lectures or additional class material (such as films) and list all main points covered to date on the current course topic		1.94	1-3

Frequency Counts for Items 1-10:

1.	1=6 2=9 3=1	2.	1=10 2=5 3=1	3.	1=0 2=9 3=7
4.	1=1 2=10 3=5	5.	1=6 2=5 3=5	6.	1=4 2=5 3=7
7.	1=0 2=3 3=13	8.	1=8 2=6 3=2	9.	1=1 2=8 3=7
10.	1=4 2=9 3=3				

D. Meta-assessment: NO=12

11. Of the above strategies for learning (1-10), I did not know that I could do the following (number/s):

NO=6 1=1 2=2 5=3 6=1 7=1 8=4 10=1

12. Of the above strategies for learning (1-10), I had assumed or expected the instructor to do the following (number/s):

NO=12 1=2 2=1 3=1 4=3 5=5 7=1 8=4 10=3

CAT 2: RESULTS NO=16
HUM 106 TH
S99

READING AS LEARNING: Learning Strategies

Circle the frequency of the following learning strategies that you use while completing a reading assignment from one of the course texts:

scale: rarely: 1 sometimes: 2 always: 3

		Range (R)
A. While reading the text,		
1. I underline important passages	1.63	1-3
2. I make notes in the text margin	1.56	1-3
3. I make connections between new knowledge and relevant prior knowledge	2.50	1-3
B. After reading the text,		
4. I reflect on main points and how this reading fits into the current course topic	2.50	2-3
5. I outline main points and take other notes as guides to understanding and retention	2.0	1-3
6. I note what I don't understand and what remains unclear	2.31	1-3
7. I consult additional relevant class materials, such as handouts with study questions, to verify my understanding of the text and main ideas	2.69	2-3
8. I self-test: I construct questions on main points, then see how well I answer these	1.19	1-2
C. After		
9. completing activities 5-8, I check with classmates and/or the instructor to clarify unclear material not understood	2.38	1-3
10. completing the reading and all associated learning activities (1-9 above), I connect what I have learned to class lectures or additional class material (such as films) and list all main points covered to date on the current course topic	1.94	1-3

Frequency Counts for Items 1-10:

1.	1=8 2=6 3=2	2.	1=9 2=5 3=2	3.	1=1 2=6 3=9
4.	1=0 2=8 3=8	5.	1=3 2=10 3=3	6.	1=3 2=5 3=8
7.	1=0 2=5 3=11	8.	1=13 2=3 3=0	9.	1=3 2=4 3=9
10.	1=4 2=9 3=3				

D. Meta-assessment: NO=13

11. Of the above strategies for learning (1-10), I did <u>not</u> know that I could do the following (number/s):

NO=3 5=1 8=2

12. Of the above strategies for learning (1-10), I had assumed or expected the instructor to do the following (number/s):

NO=11 1=1 2=1 3=5 4=8 5=4 7=1 8=1 9=1 10=3

Comments:

re: A 1/2: "I can't bring myself to write in a book."

C 10: "I make a mental list, but not a physical list."

D 11: "never thought about doing self-testing (8) before"

"some that I don't do are time consuming and aren't that helpful"

"I know I can do all of these, but a lot of the time I don't know how to go about it"

General Comments:

(1)
"I prefer the atmosphere that is present now, in which I find myself eager to participate in reflection on readings and then the communication of ideas, issues, etc. in class. This teaching approach is preferable for me, as it forces me to do the thinking instead of being handed main ideas etc. by the instructor. It also leaves me free to form my own ideas and make my own decisions about meanings in the readings. This kind of self-thought to me is the most important aspect of learning, and this class, with the present atmosphere and teaching approach, makes it possible to be self-reliant in learning - which carries over to my other classes. Please make no changes in instructional approach to intercede in this self-reliant learning process, but instead continue to encourage it."

(2)
"Insight from the instructor on relevant points in the novels and key passages is vital ... I enjoy seeing what the teacher believes is most relevant, which comes through in notes and outlines and discussion."

Appendix D: Student Statement About Different Learning Strategies

Appendix D

Student Statement About Different Learning Strategies

"The Things I've Learned This Semester"

"I must admit when I first entered this class, I thought I was going to hate it. My friend and I both agreed, after only being in class one time, that it was not for us. We both had closed minds: the learning and teaching techniques were so different from what we were used to - and we didn't like that difference. She decided to drop, but I decided to stick it out because it was a required course, which I needed to get my degree.

By being quick to judge and closing her mind to a different style of learning, she lost out. She didn't get to experience what I have, as did all the others in class. This class has been so very different from any class I've had, and I have learned greatly from it. At the start of the semester my idea of learning and school was to go to school, listen to a teacher's lecture, take notes, do homework questions, memorize the notes, take tests, and then I didn't really care if I remembered what I'd learned after the test was over. My main purpose for going to school was to get good grades and to earn a degree. No one ever questioned my style of "learning," and I think many others will use this style all their lives. But you, and others in the class, have shown me that there is something much better than just memorizing information and getting a college degree. Now for me, it's not so much the degree that's important any more - it's the process of learning and becoming truly educated. Now I really want to learn actively and to think of school not as an earned degree but as the power of higher learning.

No class or teacher before had ever given me the opportunity to become actively involved in the learning approach, especially making me think, the way your teaching approach has done. In order to meet the requirements of the assignments, I was actually forced to analyze my own views of the readings. Before, I never really took time to think about what I learned from an article, what remaining questions I had about it, or how my outlook on life was changed by it.

Now I realize that in order to be truly educated, I must create a continuous learning process, always thinking of questions and analyzing my own view of things."

Source:
LAS 189: Introduction to the Liberal Arts and Sciences

Appendix E: Sample Instructor-Prepared Questions About the Novel *In the Time of the Butterflies*

Appendix E: Sample Instructor-Prepared Questions About the Novel In the Time of the Butterflies

HUM 106: LATIN AMERICAN CULTURE AND CIVILIZATION

Juergen Hoegl

Julia Alvarez, In the Time of the Butterflies (1995)

ch 1:

1. What issues of identity and of a troubled past is the "gringa dominicana" trying to resolve by researching the story of the Mirabal sisters and writing it?

3. Patria is the oldest of the four Mirabal sisters. What seems to be the motivation for the birth of the other three sisters (8; also cf 12)? Could this have been a major motivating factor for their lives?

ch 2:

5. How does the cage symbolism early in the novel (11, 13) alert the reader to the issues of personal freedom and autonomy as one of the novel's main themes? Are those freedoms ever attained in the lives of the Mirabal sisters?

7. What is the sad story of beautiful Lina (20-23)? How does it serve to show the growing disillusionment of Minerva begun with Sinita's revelation of "Trujillo's secret"? Why does Minerva remind us of her youthful innocence later by not yet seeing Trujillo as a saint-turned-devil as she assumes him to have a conscience (24)?

ch 4:

10. What is Patria's initial assessment of Trujillo (51)? Patria then describes her disillusionment as a loss, comparing the loss of her baby and of her belief in a good leader (55). What does this comparison tell us about the nature of Patria's disillusionment, contrasted with how Minerva has earlier described her disillusionment (24)?

11. What happens to Patria Mercedes during her pilgrimage to Higüey (59)?